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DERWENT-ACC-NO: 2004-266742
DERWENT-WEEK: 200425
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TITLE: Method and device for electromagnetic agitation of conductive melt

INVENTOR: KULINSKII, A I

PATENT-ASSIGNEE:

ASSIGNEE	CODE
AVISMA TITANIUM-MAGNESIUM COMB STOCK CO	AVISR

PRIORITY-DATA: 2002RU-0121515 (August 5, 2002)

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
RU 2224966 C1	February 27, 2004		000	F27D023/04

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
RU 2224966C1	August 5, 2002	2002RU-0121515	

INT-CL (IPC): B01 F 13/08; F27 D 23/04

ABSTRACTED-PUB-NO: RU 2224966C

BASIC-ABSTRACT:

NOVELTY - The method consists in the influence of an electromagnetic field on the conductive melt in a mixer, furnace or ladle, the electromagnetic field is produced inside the conductive melt by superposition of crossed electric and magnetic fields, the electric field strength in the circuit connector is maintained within 0.5 to 5.0 V/m, and the magnetic field strength - (1-5) multiply 109 A/m. The device has a reservoir in the form of a mixer, furnace or ladle for placing of the conductive melt and the source of the electromagnetic field in it, the source of the electromagnetic field is made in the form of `s transformer and a metal circuit with an interrupted lower part provided with a magnetic core for placement in the melt, and the upper part of the circuit is located above the reservoir and connected to the transformer. The side surfaces of the lower part of the circuit, placed in the melt, are coated with electric insulating material. The U-shaped magnetic core is made in the form of a saddle, it is positioned above the interrupted part of the circuit and made of a material with a high magnetic permeability, whose Curie point exceeds the temperature of the conductive melt. A ferrocobalt alloy is used as the material for the magnetic core.

USE - Nonferrous metallurgy, in particular, methods and devices for agitation of nonferrous metals and their alloys in a reservoir in the form of a mixer, furnace or ladle.

ADVANTAGE - Enhanced efficiency of agitation of the conductive melt, intensified process and enhanced quality of the produced alloys due to the reduced content of oxide and flux inclusions. 7 cl, 2 dwg, 1 ex

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: METHOD DEVICE ELECTROMAGNET AGITATE CONDUCTING MELT

DERWENT-CLASS: Q77

SECONDARY-ACC-NO:
Non-CPI Secondary Accession Numbers: N2004-210757

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